# REPORT

## DETERMINATION OF THE FLASH-POINT OF

[redacted]

**NOTOX Project 327342**
**NOTOX Substance 111834**

## CONFIDENTIALITY STATEMENT

This report contains the unpublished results of research sponsored by [redacted]Reproduction, issue or disclosure to third parties in any form is not permitted without prior written authorisation from the sponsor.

## STATEMENT OF GLP COMPLIANCE

NOTOX B.V., 's-Hertogenbosch, The Netherlands

The study described in this report has been correctly reported and was conducted in compliance with the most recent edition of:

The OECD Principles of Good Laboratory Practice

which are essentially in conformity with:

The United States Food and Drug Administration. Title 21 Code of Federal Regulations Part 58.

The United States Environmental Protection Agency (FIFRA). Title 40 Code of Federal Regulations Part 160.

The United States Environmental Protection Agency (TSCA). Title 40 Code of Federal Regulations Part 792.

Study Director

Ing. H.J. Krips

.....

Date: 24 October 2001

Management

Dr. Ir. H. Willems
Head of Chemistry

.....

Date: October 24, 2001

## QUALITY ASSURANCE STATEMENT

NOTOX B.V., 's-Hertogenbosch, The Netherlands

This report was audited by the NOTOX Quality Assurance Unit to ensure that the methods and results accurately reflect the raw data.

The dates of Quality Assurance inspections and audits are given below.
During the on-site inspections procedures applicable to this type of study were inspected.

| DATES OF QAU INSPECTIONS/AUDITS | REPORTING DATES |
|---|---|
| on-site inspection (s) | |
| 23-Apr-2001 to 04-May-2001 (process) | 07-May-2001 |
| protocol inspection (s) | |
| 27-Jul-2001 (study) | 27-Jul-2001 |
| report audit (s) | |
| 27-Aug-2001 (study) | 27-Aug-2001 |

Head of Quality Assurance
C.J. Mitchell B.Sc.

Date: 26-Oct-2001

## SUMMARY

The determination of the flash-point of [redacted] was performed using a Pensky-Martens closed cup flash-point apparatus, in accordance with EEC-Directive 92/69 EEC, A.9 "Flash-point" (1992) and DIN EN 22719: "Bestimmung des Flammpunktes Verfahren nach Pensky-Martens im geschlossenen Tiegel"; December 1993.

The flash-point of [redacted] is 72°C when using a Pensky-Martens closed cup flash-point apparatus.

## PREFACE

| | |
|---|---|
| Sponsor | [redacted] |
| Study Monitor | Dr. C.L.J. Braun<br>SHERA, Regulatory Affairs Department |
| Testing Facility | NOTOX B.V.<br>Hambakenwetering 7<br>5231 DD 's-Hertogenbosch<br>The Netherlands |
| Study Director | Ing. H.J. Krips |
| Study Plan | Start : 07 August 2001<br>Completed : 07 August 2001 |

## TEST SUBSTANCE

| | |
|---|---|
| Identification | [redacted] |
| Chemical name | [redacted] |
| CAS RN | Not yet assigned |
| Description | Clear colourless liquid |
| Batch | VRS01048 |
| Purity | Treat as 100% pure |
| Test substance storage | In refrigerator in the dark |
| Stability under storage conditions | Not indicated |
| Expiry date | 12 July 2002 (allocated by NOTOX, 1 year after receipt of the test substance) |

The sponsor is responsible for all test substance data unless determined by NOTOX.

## PURPOSE

The purpose of the study was to evaluate the flash-point of the test substance.

## GUIDELINES

The study procedures described in this report are based on the following guidelines:

European Economic Community (EEC), EEC-Directive 92/69 EEC, Part A, Methods for the determination of physico-chemical properties, A.9 "Flash-point", EEC Publication No. L383, December 1992.

DIN EN 22719: "Bestimmung des Flammpunktes Verfahren nach Pensky-Martens im geschlossenen Tiegel"; December 1993.

## ARCHIVING

NOTOX B.V. will archive the following data for at least 10 years:
protocol, report, test substance reference sample and raw data. Thereafter, no data will be withdrawn without the sponsor's written consent.

## TEST SYSTEM AND RATIONALE

| | |
|---|---|
| Test system | A Pensky-Martens closed flash-point tester (according to DIN EN 22719). |
| Conditions | The apparatus was placed in a fume-cupboard. The window of the cupboard was left open to reduce the draft to a minimum. |
| Rationale | Recognized by the international guidelines as recommended test system (EEC, DIN). |

## VALIDATION OF THE TEST PROCEDURE

The test procedure as outlined in this report is validated periodically, using p-xylene (zur synthese; Merck, FRG).
The results are in accordance with the NOTOX criteria for validation.

## PERFORMANCE OF THE TEST

### Preparations

The cup of the flash-point apparatus was filled with the sample to be tested to the level indicated by the filling mark. The lid, with a thermocouple for detection of the flash point and a resistance thermometer for measuring the sample temperature, was placed on the cup. Thereafter, the cup was placed in the heating block.

### Performance of the test

The test substance was heated in the apparatus with a temperature rise of approximately 5°C/min. The sample was stirred while being heated.
The test flame was applied so that the flame was lowered into the vapour space of the cup in 0.5 s, left in its lowered position for 1 s, and quickly raised to its high position. The sample was not stirred while the test flame was applied.

### Preliminary test

The test substance temperature was 16°C at the start of the test.
Starting at 19°C, a test flame was applied at each 2°C temperature rise.

Main study

The test was performed in duplicate.
The test substance temperature was 21°C and 22°C at the start of test one and two, respectively.
Starting at 51°C, a test flame was applied at each 1°C temperature rise.

## DATA HANDLING

The flash-point is the lowest temperature at 101.3 kPa, at which the test liquid in a closed test vessel evolves vapours, under the conditions defined in the test method, in such amount that a flammable vapour/air mixture will be produced in the test vessel.

The (lowest) flash-point temperature was corrected for the atmospheric pressure.

Corrected flash-point = C + 0.25 (101.3 - p)
where: C = (lowest) observed flash-point [°C]
p = ambient barometric pressure [kPa]

The corrected flash-point is reported in °C and rounded off to 0.5°C.

## RESULTS

Preliminary test

Flash-point: 70°C

Main study

Table 1: Determined flash-points during the main study.

| Test number | Flash-point [°C] | Lowest Flash-point [°C] |
|---|---|---|
| 1 | 72 | 72 |
| 2 | 72 | |

The atmospheric pressure on the day of the test, was 101.08 kPa.

The lowest flash-point was corrected for the atmospheric pressure.

Corrected flash-point = 72 + 0.25(101.3-101.08)°C
= 72.1°C

In conclusion, the flash-point of [redacted] is 72°C under the conditions of the test.

CERTIFICATE OF ANALYSIS

[redacted]

# Certificate of Analysis

[redacted]



ICS-331

**Product name** : [redacted]

**Chemical name** : [redacted]

**Batch number** : [redacted]

**Test results:**

| Method | Analysis of | Unit | Result *1 |
|---|---|---|---|
| Col/86.2, Jo/95.2 | Peroxidic compounds (sum) ***See page 2 for a specification*** | % m/m | 28.9 (± 1.5) |
| J20010381 | Dimethyl phthalate | % m/m | 66.0 (± 1.0) |
| J20010381 | Methyl isopropyl ketone | % m/m | 2.7 (± 0.3) |
| Amp/88.9 | Water | % m/m | 2.8 (± 0.3) |
| J20010381 | Unidentified impurities | % m/m | 0.5 (± 0.2) |

*1 bracketed values are estimated 95% confidence intervals

File code : **TNA-2001004**

Analytical documentation : 20010381

**Authorized by**

Name : [redacted]
Function : [redacted]
Date : [redacted]

Signature : [redacted]

[redacted]

[redacted]

# *Certificate of Analysis* [redacted]



[redacted] batch [redacted]: specification of the peroxidic compounds

| structure | % m/m |
|---|---|
| [redacted] | [redacted] |
| | [redacted] |
| | [redacted] |

[redacted]